

In the Claims:

The listing of the claims below replaces all prior versions in the application.

1. (Currently Amended) An antenna device for a portable device, the antenna device comprising

an antenna loop of conducting material having first and second ends connected to a radio frequency (RF) circuitry and a ground plane of a printed circuit board (PCB), respectively, the antenna loop being positioned opposite the ground plane; and a ground plane extender positioned at a first side of the PCB and in a longitudinal extension of the ground plane, wherein the ground plane extender is a separate piece from the ground plane.

2. (Previously Presented) The antenna device according to claim 1, wherein the antenna loop comprises first and second connectors provided at a second side of the PCB configured to connect the first and second ends of the antenna loop to the RF circuitry and the ground plane of the PCB, respectively.

3. (Previously Presented) The antenna device according to claim 2, wherein the antenna loop further comprises:

a first portion having a first and a second end, the first portion extending in a first direction along a third side of the PCB, the first end of the first portion being connected to the RF circuitry of the PCB;

a second portion having a first and a second end, the first end of the second portion being connected to the second end of the first portion, the second portion extending in a second direction from the third side of the PCB towards a fourth side thereof, which is opposite the third side; and

a third portion having a first and a second end, the first end of the third portion being connected to the second end of the second portion and the second end of the third portion being connected to the ground plane of the PCB, the third portion extending in the opposite direction of the first direction along the fourth side of the PCB.

4. (Previously Presented) The antenna device according to claim 1, wherein the PCB is a multi-layer PCB having one layer configured as a dedicated RF ground plane that provides the ground plane of the antenna device.

5. (Previously Presented) The antenna device according to claim 1, wherein the ground plane extender is at least one battery casing of a battery cell, the at least one battery casing being positioned in the longitudinal-extension of the ground plane of the PCB.

6. (Previously Presented) The antenna device according to claim 1, wherein the antenna loop is positioned opposite a first or a second surface of the PCB.

7. (Previously Presented) The antenna device according to claim 1, wherein the conducting material of the antenna loop is metal.

8. (Previously Presented) The antenna according to claim 6, further comprising a U-shaped dielectric having the antenna loop-etched into the dielectric.

9. (Previously Presented) The antenna device according to claim 4, wherein the antenna loop is provided inside the PCB.

10. (Previously Presented) The antenna device according to claim 1 wherein the PCB further comprises a second side opposite the first side, a third side adjacent the first and second sides, and a fourth side opposite the third side, the antenna device further comprising a bezel connected to the PCB that extends from the third side of the PCB towards the fourth side of the PCB, and/or bezel flanges connected to the ground plane and extending along the third and fourth sides of the PCB.

11. (Currently Amended) A multi-layer printed circuit board (PCB) comprising:

a radio frequency (RF) circuitry and a ground plane on the PCB;
an antenna device connected to the PCB, the antenna device comprising:
an antenna loop of conducting material having first and second ends connected to the radio frequency (RF) circuitry and the ground plane of the PCB, respectively, the antenna loop being positioned opposite the ground plane; and a ground plane extender positioned at a first side of the PCB and in a longitudinal extension of the ground plane, wherein the ground plane extender is a separate piece from the ground plane.

12. (Currently Amended) A portable communication device comprising:
a printed circuit board (PCB) comprising a radio frequency (RF) circuitry and a ground plane;
an antenna device connected to the PCB, the antenna device comprising:
an antenna loop of conducting material having first and second ends connected to the radio frequency (RF) circuitry and the ground plane of the PCB, respectively, the antenna loop being positioned opposite the ground plane; and a ground plane extender positioned at a first side of the PCB and in a longitudinal extension of the ground plane, wherein the ground plane extender is a separate piece from the ground plane.

13. (Previously Presented) The portable communication device according to claim 12, wherein the portable communication device is a headset.

14. (Previously Presented) The loop antenna device according to claim 1, wherein the ground plane extender is a battery casing.

15. (Previously Presented) The loop antenna device according to Claim 1, wherein the first and second ends of the antenna loop comprise a planar portion configured to contact the radio frequency (RF) circuitry and the ground plane of the printed circuit board (PCB).

16. (Previously Presented) The loop antenna device according to Claim 1, wherein the first and second ends of the antenna loop are directly connected to the radio frequency (RF) circuitry and the ground plane of the printed circuit board (PCB).

17. (New) The loop antenna device according to Claim 1, wherein the ground plane extender is not in direct contact with the ground plane of the printed circuit board (PCB).

18. (New) the loop antenna device according to Claim 1, wherein the ground plane extender and the ground plane of the printed circuit board (PCB) together form an extended ground plane that is larger than the ground plane of the printed circuit board (PCB).